

pMSCV-Puro-GFP miR-503

Absent Sites	0	AarI, AbsI, Accl, AjuI, AjuI', AlfI, AlfI', ApaI, AsiSI, AvrII, BamHI, BarI, BarI', BbsI, BclI, BsaAI, BsaBI, BstBI, BstXI, BstZ17I, CspCI, CspCI', FseI, FspAI, HincII, HpaI, MauBI, MfeI, MreI, PacI, PflMI, PmeI, PmlI, PshAI, PstI, PspOMI, PspXI, PstI, PstI', Sall, SanDI, SbfI, SfiI, SgrDI, SnaBI, SrfI, SwaI, XhoI
Arsl	1	1732
Arsl'	1	1700
BglII	1	1411
BsiWI	1	3137
BsmI	1	2992
Clal	1	3735
EcoRI	1	2551
HindIII	1	3072
MluI	1	2221
NcoI	1	1436
NdeI	1	6868
NotI	1	2158
NruI	1	2549
NsiI	1	3734
PciI	1	4804
RsrII	1	3197
SacII	1	3295
Scal	1	6177
SgrAI	1	7240
XcmI	1	2498

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5' TGAAAGACCCACCTGTAGGTTTGGCAAGCTAGCTTAAGTAACGCCATTTTGAAGGCATGGAAAATACATAACTGAGAATAGAGAAGTTCAGATCAAGG
 100
 3' ACTTCTGGGGTGGACATCCAAACCGTTCGATCGAATTCATTGCGGTAACAGTTCCTGACCTTTTATGTATTGACTCTTATCTCTTCAAGTCTAGTTCC
 5' pCMV LTR

5' TTAGGAACAGAGACAGCAGAATATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCCTGCCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCG
 200
 3' AATCCTTGTCTCTCTGTGCTTATACCCGGTTTGTCTTATAGACACCATTTCGTCAAGGACGGGGCCGAGTCCCGGTTCTTGTCTACCAGGGGTCTACGC
 5' pCMV LTR

5' GTCCCGCCCTCAGCAGTTTCTAGAGAACCATCAGATGTTTCCAGGGTGCCCCAAGGACCTGAAATGACCCTGTGCCTTATTTGAACTAACCAATCAGTTC
 300
 3' CAGGGCCGGGAGTCTGCAAGATCTCTTGGTAGTCTACAAAGTCCACGGGGTTCCTGGACTTTACTGGGACACGGAATAAACTTGATTGGTTAGTCAAG
 5' pCMV LTR

5' GCTTCTCGTCTCTGTTCGCGCCTTCTGCTCCCCGAGCTCAATAAAAAGAGCCACAAACCCCTCACTCGGCGCGCAGTCTCCGATAGACTGCGTCCCC
 400
 3' CGAAGAGCGAAGACAAGCGCGGAAGACGAGGGGCTCGAGTTATTTTCTCGGGTGTGGGGAGTGAGCCGCGCGGTGAGGAGGCTATCTGACCGAGCGGG
 5' pCMV LTR

5' GGGTACCCGTATTCCCAATAAAGCCTCTTGCTGTTTGCATCCGAATCGTGGACTCGCTGATCCTTGGGAGGGTCTCCTCAGATTGATTGACTGCCACCT
 500
 3' CCCATGGGCATAAGGGTTATTTTCGGAGAACGACAAACGTAGGCTTAGCACCTGAGCGACTAGGAACCCCTCCAGAGGAGTCTAACTAACTGACGGGTGGA
 5' pCMV LTR

5' CGGGGTCTTTTCAATTTGGAGGTTCCACCGAGATTGGAGACCCCTGCCAGGGACCACCGACCCCCCGCGGGAGGTAAGCTGGCCAGCGGTCTGTTTCG
 600
 3' GCCCCAGAAAGTAAACCTCCAAGGTGGCTCTAAACCTCTGGGGACGGGTCCCTGTTGGCTGGGGGGCGGCCCTCCATTCGACCGGTGCGCAGCAAAAGC
 5' pCMV LTR

Pack Signal

5' TGTCTGTCTCTGTCTTGTGCGTGTGTGCGCCGCATCTAATGTTTGGCCCTGCGTCTGTACTAGTTAGCTAACTAGCTCTGTATCTGGCGGACCCGTGG
 700
 3' ACAGACAGAGACAGAAACACGCACAAACACGGCCGTAGATTACAAACCGCGACGCAGACATGATCAATCGATTGATCGAGACATAGACCGCTGGGCACC
 Pack Signal

5' TGGAATGACGAGTTCGAAACCCCGCCGAACCTGGGAGACGTCCCAGGGACTTTGGGGCCGTTTGTGGCCCGACCTGAGGAAGGGAGTCTGATG
 800
 3' ACCTTGACTGCTCAAGACTTGTGGGCCGGCGTTGGGACCTCTGCAGGGTCCCTGAAACCCCGGCAAAAACACCGGGCTGGACTCCTTCCTCAGCTAC
 Pack Signal

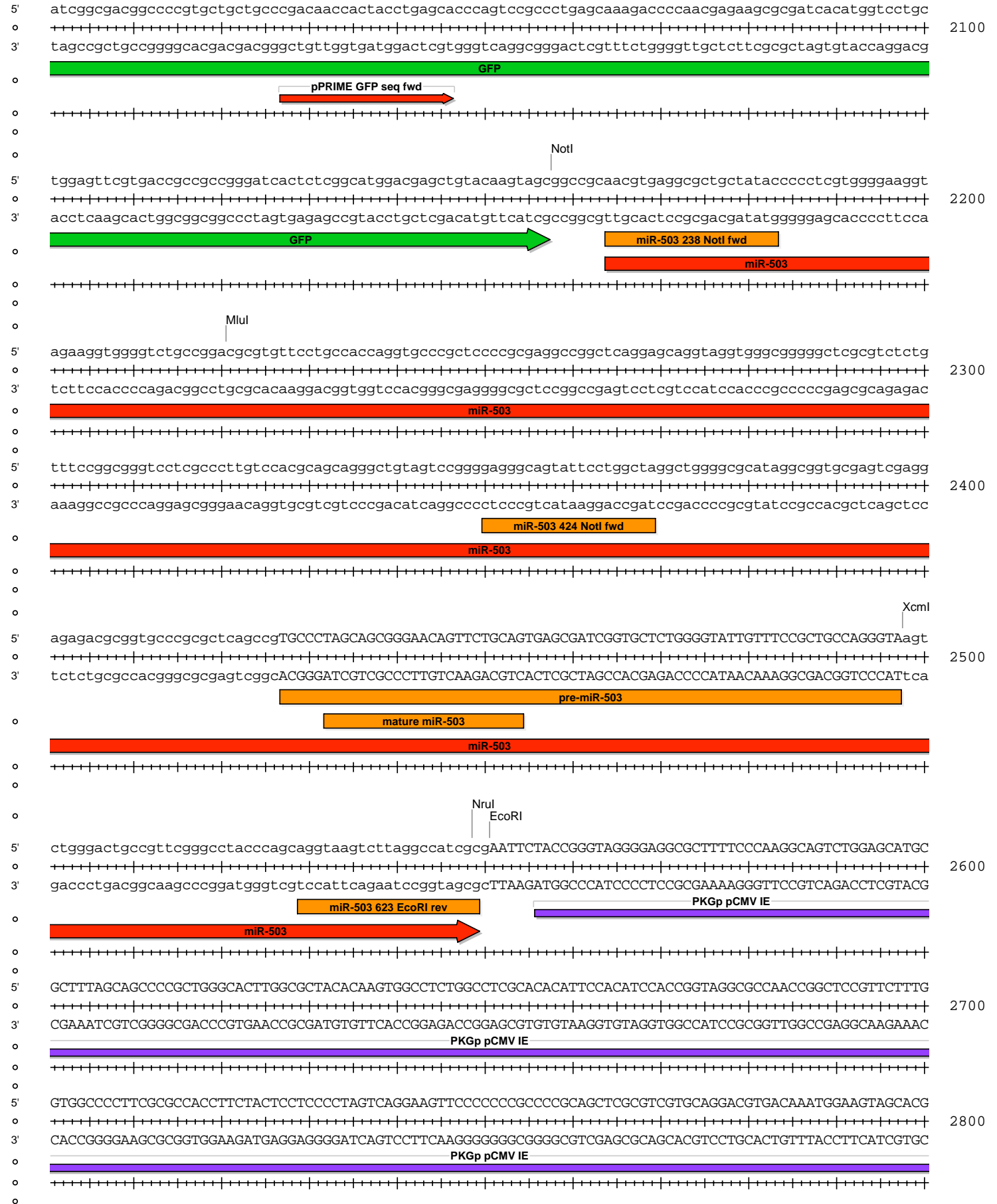
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 900
 3' ACCTTAGGCTGGGGCAGTCTTATACACCAAGACCATCCTCTGCTCTTGGATTTTGTCAAGGGCGGAGGCAGACTTAAAAACGAAAGCCAAACCTTGCTT
 Pack Signal

5' GCCGCGCTCTGTCTGCTGCAGCGCTGCAGCATCGTTCGTGTGTCTCTGTCTGACTGTGTTTCTGTATTTGTCTGAAAATTAGGGCCAGACTGTTAC
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 3' CGGGCGCAGAACAGACGACGTCGCGACGTCGTAGCAAGACACAAACAGAGACAGACTGACACAAAGACATAAACAGACTTTTAAATCCCGGTCTGACAATG
 Pack Signal

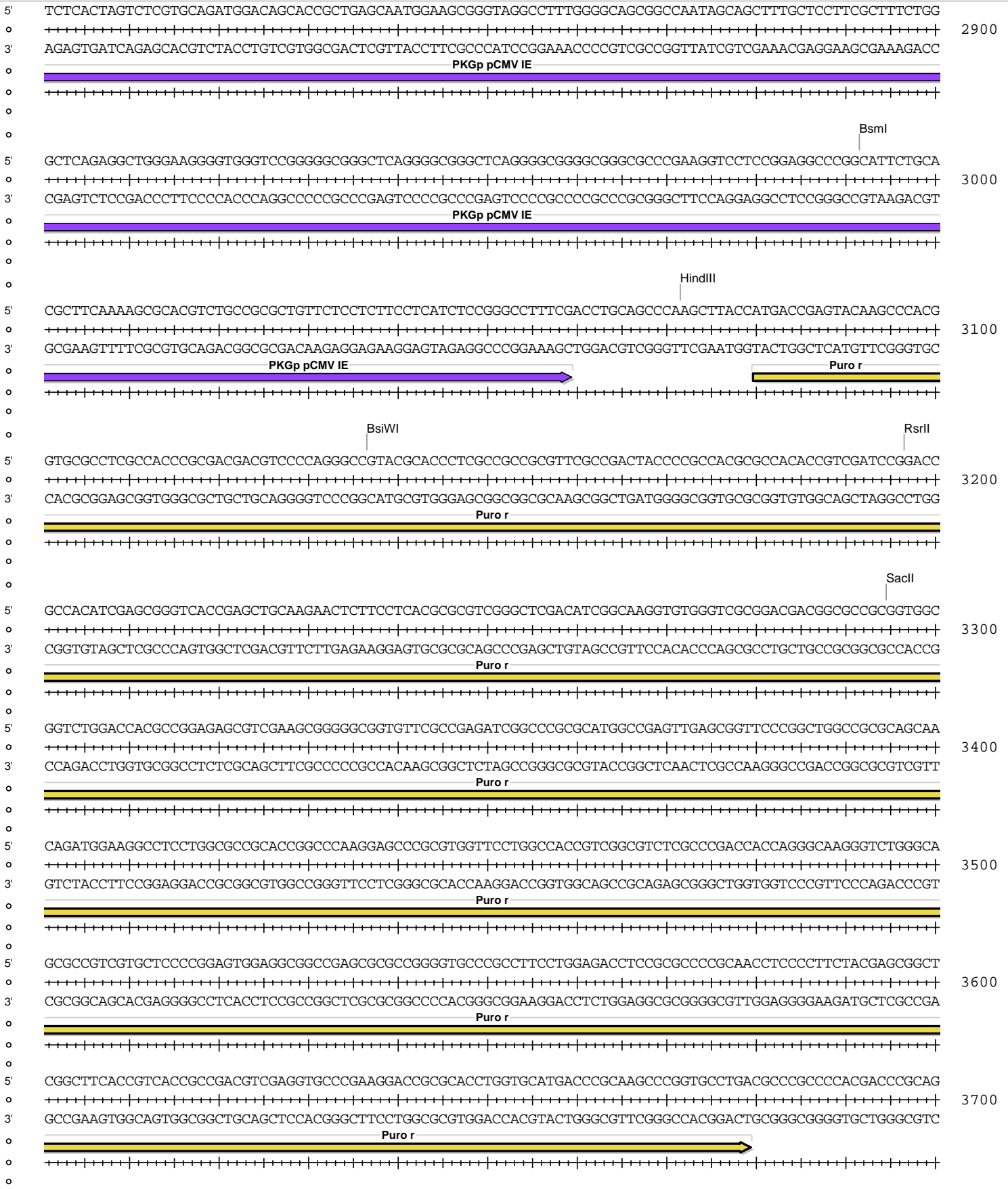
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NsiI
 ClaI

5' CGCCCACCAGAAAGGAGCGCAGACCCCATGCATCGATAAAAAATAAAGATTTTATTTAGTCTCCAGAAAAGGGGGGAATGAAAGACCCACCTGTAGGT
 3' GCGGGCTGGCTTTCCTCGCGTGTGGGTACGTAGCTATTTATTTCTAAAATAAATCAGAGGTCTTTTCCCCCTTACTTTCTGGGGTGGACATCCA
 3800
 5' TTGGCAAGCTAGCTTAAGTAACGCCATTTTGAAGGCATGAAAAATACATAACTGAGAATAGAGAAGTTCAGATCAAGTTCAGAACAGAGACAGCAG
 3' AACCGTTCGATCGAATTCATTCGGTAAAACGTTCCGTACCTTTTATGTATTGACTCTTATCTTTCAAGTCTAGTTCCAATCCTTGTCTCTGTCTGTC
 3900
 3' pCMV LTR
 5' AATATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCCTGCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCGGTCCCGCCCTCAGCAGTTCT
 3' TTATACCCGGTTTGTCTATAGACACCATTCGTCAAGGACGGGGCCGAGTCCCGTTCTTGTCTACCAGGGTCTACGCCAGGGCGGGAGTCGTCAAAGA
 4000
 3' pCMV LTR
 5' AGAGAACCATCAGATGTTCCAGGGTGCCCAAGGACCTGAAATGACCCGTGCCTTATTTGAACTAACCAATCAGTTCGCTTCTCGTTCGTTCGCGC
 3' TCTCTTGGTAGTCTACAAAGGTCCCACGGGGTCTCGACTTTACTGGGACACGGAATAAATTGATGGTTAGTCAAGCGAAGAGCGAAGACAAGCGCG
 4100
 3' pCMV LTR
 5' GCTTCTGCTCCCCGAGCTCAATAAAAGAGCCCAACCCCTCACTCGGGCGCCAGTCTCCGATAGACTGCGTCGCCCGGTACCCGTGTATCCAATA
 3' CGAAGACGAGGGGCTCGAGTTATTTCTCGGGTGTGGGGAGTGAGCCGCGGGTCAAGAGGCTATCTGACGCAGCGGGCCATGGGCACATAGGTTATT
 4200
 3' pCMV LTR
 5' ACCCTCTTGCAAGTTCATCCGACTTGTGGTCTCGTGTTCCTTGGGAGGGTCTCCTCTGAGTGATTGACTACCCGTGAGCGGGGTCTTTCATGGGTAAC
 3' TGGGAGAACGTCAACGTAGGCTGAACACCAGAGCGACAAGGAACCTCCAGAGGAGACTACTAATGATGGGCAGTCCGCCAGAAAGTACCCATTG
 4300
 3' pCMV LTR
 5' AGTTTCTTGAAGTTGGAGAACAACATTTCTGAGGGTAGGAGTCGAATATTAAGTAATCCTGACTCAATTAGCCACTGTTTGAATCCACATACTCCAATAC
 3' TCAAAGAACTTCAACCTCTTGTGTGAAGACTCCCATCCTCAGCTTATAATTCATTTAGGACTGAGTTAATCGGTGACAAAACCTTAGTGTATGAGGTTATG
 4400
 5' TCCTGAAATAGTTCATTATGGACAGCGCAGAAGAGCTGGGGAGAATTAATTCGTAATCATGGTCATAGCTGTTTCTGTGTGAAATTTGTTATCCGCTCAC
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 4500
 5' AATTCACACAACATACGAGCCGGAAGCATAAAGTGTAAAGCCTGGGGTGCCCTAATGAGTGAGCTAACTCACATTAATTGCGTTCGCTCACTGCCCCT
 3' TTAAGGTGTGTGTATGCTCGCCCTTCGTATTTTCAATTCGGACCCACGGATTACTCACTCGATTGAGTGTAAATTAACGCAACGCGAGTGACGGGCGA
 4600
 5' TTCCAGTCGGGAAACCTGTCTGTCAGCTGCATTAATGAATCGGCCAACGCGGGGAGAGCGGTTTGGTATGGGCGCTCTTCCGCTTCTCTCGTCA
 3' AAGGTACAGCCCTTGGACAGCACGGTGCAGTAATTACTTAGCCGGTTGCGCGCCCTCTCCGCCAAACGCATAACCCGCGAGAAGGCGAAGGAGCGAGT
 4700
 5' CTGACTCGCTGCGCTCGGTTCGGCTGCGGGCAGCGGATCAGCTCACTCAAAGGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCAGGAAA
 3' GACTGAGCGACGCGAGCCAGCAAGCCGACCCGCTCGCCATAGTCGAGTGAGTTCCGCCATTATGCCAATAGGTGTCTTAGTCCCCTATTGCGTCTTT
 4800

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Pcil

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5' GAACATGTGAGCAAAAAGGCCAGCAAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAA
o ++++++ 4900
3' CTTGTACACTCGTTTTCCGGTCGTTTTCCGGTCCTTGGCATTTCGGCGCAACGACCGCAAAAAGGTATCCGAGGCGGGGGACTGCTCGTAGTGTTT
o ++++++
o
5' AATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCC
o ++++++ 5000
3' TTAGCTGCGAGTTCAGTCTCCACCGCTTTGGGCTGTCTGATATTCTATGGTCCGCAAAGGGGACCTTCGAGGGAGCACGCGAGAGGACAAGGCTGGG
o ++++++
o
5' TGCCGCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCG
o ++++++ 5100
3' ACGGCGAATGGCCTATGGACAGGCGGAAAGAGGAAGCCCTTCGCACCGCAAAGAGTATCGAGTGCACATCCATAGAGTCAAGCCACATCCAGCAAGC
o ++++++
o
5' CTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGTAAGACACGACTTA
o ++++++ 5200
3' GAGGTTGACCCGACACACGTGCTTGGGGGCAAGTCGGGCTGGCGACGCGGAATAGGCCATTGATAGCAGAACTCAGGTTGGGCCATTCTGTGCTGAAT
o ++++++
o
5' TCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTA
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3' AGCGGTGACCGTCTCGGTGACCATTGTCTAATCGTCTCGCTCCATACATCCGCCACGATGTCTCAAGAACTCACCAACCGGATTGATGCCGATGTGAT
o ++++++
o
5' GAAGGACAGTATTGGTATCTGCGCTCTGTGAAGCCAGTTACCTTCGGA AAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACCCACCGCTGGTAGCGG
o ++++++ 5400
3' CTTCTGTCTATAAACCATAGACGCGAGACGACTTCGGTCAATGGAAGCCTTTTTCTCAACCATCGAGAACTAGGCCGTTTGGTTGGTGGCGACCATCGCC
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5' TGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAA
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3' ACCAAAAAACAACGTTTCGTCTAATGCGCTCTTTTTTCTTAGAGTCTCTTAGGAAACTAGAAAAGATGCCCCAGACTGCGAGTCACTTGCCT
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3' TACTCATTGAACAGACTGTCAATGGTTACGAATTAGTCACTCCGTGGATAGAGTTCGCTAGACAGATAAAGCAAGTAGGTATCAACGGACTGAGGGGCA
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3' GCACATCTATTGATGTATGCCCTCCCGAATGGTAGACGGGGTACGACGTTACTATGGCGCTCTGGGTGCGAGTGGCCGAGGTCTAAATAGTCTGTTAT
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o
5' AACCAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCTGCAACTTTATCCGCCCTCCATCCAGTCTAATTAATTGTTGCCGGAAGCTAGAGTAAGTAGTT
o ++++++ 5900
3' TTGGTTCGGTTCGGCCTTCCCGGCTCGCGTCTTACCAGGACGTTGAAATAGCGGAGGTAGGTCAGATAATTAACAACGGCCCTTCGATCTCATTTCATCAA
o ++++++
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5' CGCCAGTTAATAGTTTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTACGCTCGTCTGGTATGGCTTCATTTCAGCTCCGGTTCCCAACG
o ++++++ 6000
3' GCGGTCAATTATCAAACGCGTTGCAACAACGGTAACGATGTCCGTAGCACCACAGTGCAGGAGCAGCAAACCATAACGAAGTAAGTCGAGGCCAAGGGTTGC
o ++++++
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Amp Res

Amp Res

Amp Res

Amp Res

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5' ATCAAGGCGAGTTACATGATCCCCATGTTGTGCAAAAAGCGGTTAGCTCCTTCGGTCCTCCGATCGTTGTCAGAAGTAAGTTGGCCGAGTGTATCA
 6100
 3' TAGTTCGCTCAATGTACTAGGGGTACAACACGTTTTTTTCGCCAATCGAGGAAGCCAGGAGGCTAGCAACAGTCTTCATTCAACCGGCGTCACAATAGT
 Amp Res

5' CTCATGGTTATGGCAGCACTGCATAATCTCTTACTGTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTCTGAGAAT
 6200
 3' GAGTACCAATACCGTCGTGACGTATTAAGAGAATGACAGTACGGTAGGCATTCTACGAAAAGACACTGACCCTCATGAGTTGGTTCAGTAAGACTCTTA
 Amp Res

5' AGTGTATGCGGCGACCGAGTTGCTCTTGCCCGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCTCATCATTGGAAAACGTTT
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 3' TCACATACGCCGCTGGCTCAACGAGAACGGGCCGAGTTATGCCCTATTATGGCGCGGTGTATCGTCTTGAAATTTTACAGTAGTAACCTTTTGAAG
 Amp Res

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 6400
 3' AAGCCCCGCTTTTGAGAGTTCTTAGAATGGCGACAACCTTAGGTCAAGCTACATTGGGTGAGCACGTGGGTTGACTAGAAAGTCGTAGAAAAAGAAAGTGG
 Amp Res

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 Amp Res

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 3' TAATAACTTCGTAAATAGTCCCAATAACAGAGTACTCGCCTATGTATAAACTTACATAAATCTTTTTATTTGTTTATCCCAAGGCGCGTAAAGGGGC
 Amp Res

5' AAAAGTGCCACCTGACGTCTAAGAAACCATTTATCATGACATTAACCTATAAAAAATAGGCGTATCACGAGGCCCTTTCGTCTCGCGCTTTCGGTGAT
 6700
 3' TTTTACCGGTGGACTGCAGATCTTTGGTAATAATAGTACTGTAATTGGATATTTTATCCGCATAGTGCTCCGGGAAAGCAGAGCGCGCAAAGCCACTA
 Amp Res

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 6800
 3' CTGCCACTTTTGGAGACTGTGTACGTGAGGGCTCTGCCAGTGTGCAACAGACATTCGCCCTACGGCCCTCGTCTGTTCCGGCAGTCCCGCGCAGTCGCC
 Amp Res

5' GTGTTGGCGGGTGTGCGGGCTGGCTTAACTATGCGGCATCAGAGCAGATTGTAAGTACTGAGAGTGACCATATGCGGTGTGAAATACCGCACAGATGCGTAAG
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 3' CACAACCGCCACAGCCCCGACCGAATTGATACGCCGTAGTCTCGTCTAACATGACTCTCACGTGGTATACGCCACACTTTATGGCGTGTCTACGCATTC
 Amp Res

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 7000
 3' CTC'TTTTATGGCGTAGTCCGCGTAAGCGGTAAGTCCGACGCGTGTGACAACCCTTCCCGCTAGCCACGCCGAGAGCGATAATGCGGTGACCGCTTT
 Amp Res

5' GGGGGATGTGCTGCAAGGCGATTAAGTTGGGTAAAGCCAGGGTTTTCCAGTACGACGTTGTAACGACGGCGCAAGGAATGGTGCATGCAAGGAGAT
 7100
 3' CCCCCTACACGACGTTCCGCTAATTCAACCCATTGCGGTCCCAAAAAGGGTCAAGTGTGCAACATTTTGTGCGCGTTCCTTACCAGTACGTTCTCTTA
 Amp Res

